

Abstract of the Disclosure

A method encodes a video by first measuring a variance of pixel intensities in a current frame. A number of bits to encode the current frame is assigned according to rate and buffer fullness constraints. A multiplier value is determined directly as a function of only the variance and the number of bits assigned to the current frame. Motion vectors between a reference frame and the current frame are estimated, and a sum of absolute difference (SAD) is based on a motion compensated residual between the reference frame and the current frame. An encoding mode is determined for each macro block in the current frame based on the sum of absolute difference, the motion vectors and the multiplier value. Then, the motion compensated residual is encoded based on the encoding mode, multiplier value and the number of allocated bits.